

AIR QUALITY PERMIT

Issued to:	Spring Creek Coal Company	Permit #1120-07
	P.O. Box 67	Application Complete: 12/22/05
	Decker, MT 59025	Preliminary Determination Issued: 01/03/06
		Department's Decision Issued: 01/23/06
		Permit Final: 02/08/06
		AFS#: 003-0003

An air quality permit, with conditions, is hereby granted to Spring Creek Coal Company (Spring Creek), pursuant to Sections 75-2-204 and 211 of the Montana Code annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. General Description

Spring Creek operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East, in Big Horn County, Montana.

B. Current Permit Action

On July 6, 2005, the Department of Environmental Quality (Department) received a Montana Air Quality Permit (MAQP) Application from Kennecot Energy for a proposed coal production increase at Spring Creek. The application requested a modification to Permit #1120-06 to increase maximum annual coal production from 15 million tons per year (MMTPY) to 20 MMTPY and to include another rail load-out facility. On December 22, 2005, the Department received additional information and the MAQP Application was considered complete.

Section II: Conditions and Limitations

A. Emission Control Requirements

1. Maximum coal production shall be limited to 20 million tons per rolling 12-month time period (ARM 17.8.749).
2. Spring Creek shall not cause visible emissions of greater than 20% opacity into the atmosphere from any process or fugitive emission source. Initial compliance with the process fugitive opacity limitation must be demonstrated in accordance with 40 CFR 60.11 (40 CFR Part 60, Subpart Y, ARM 17.8.304, and ARM 17.8.308).
3. Spring Creek shall comply with all applicable standards, limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants (ARM 17.8.340 and 40 CFR 60).
4. Spring Creek shall operate an ambient monitoring network as described in Attachment 1 of this permit. The monitoring plan will be periodically reviewed by the Department and revised, if necessary (ARM 17.8.749).

5. The following lists the required emission control technologies and techniques as described in the application.

Coal Conveyors (Facilities Area)

The above ground conveyor sides and roof shall be enclosed by metal siding. The conveyor floor shall be partially enclosed by stairs or walkways and the remaining space shall be covered by expanded metal.

Truck Dump

The truck dump pit shall be enclosed on two sides, a partial third, and the top. The opening shall face the prevailing wind direction. A dust suppression system shall be installed at the top of the truck dump hopper to suppress dust as the trucks are unloaded. The sprays shall provide a curtain across the top of the hopper to contain the dust generated by falling coal. Overhead sprays shall be used to control dust near the bed level of the trucks as they dump. Dust suppression systems shall work only when coal is being loaded on an as-necessary basis. Such systems are to be designed for year-round use.

Primary Crushers

An Agglomeration Dust Suppression (ADS) system shall be used to control dust during the primary crusher's operations. The ADS system shall also be used at strategic points in the primary crusher.

Secondary Crusher

An ADS system shall be used to control dust during the secondary crusher's operations. The ADS system shall also be used at strategic points in the secondary crusher.

Rail Load-Outs

An ADS system shall be used to collect dust during the loading of each 200-ton silo load-out bin. Telescoping chutes shall be used during railcar loading.

Overland Conveyor In-Pit Crusher

The in-pit crusher emissions shall be controlled by a baghouse. The baghouse will be used at strategic points in the in-pit crusher.

Coal Barn Storage

The 40,000-ton coal storage pile shall be completely enclosed in a storage barn. The coal storage barn stacker is to be designed to minimize the free fall distance of the coal, thus helping to minimize the creation of coal dust. An open coal stockpile may be maintained adjacent to the truck dump for blending purposes.

Overburden and Coal Removal

Best Management Practice is defined as the minimization of fall distance of coal and overburden into the trucks.

Coal and Overburden Blasting

Blasting shall be conducted in such a manner as to prevent overshooting and to minimize the area to be blasted.

Topsoil Stockpiles

Wind erosion shall be controlled by the use of temporary vegetative covers.

Coal and Overburden Haul Roads

Fugitive dust from haul roads shall be controlled by a combination of chemical dust suppressants and road watering.

Haul Road Maintenance

Haul roads shall be graded as required. Loose debris shall be removed from haul roads. Chemical dust suppressants shall be reapplied as required.

Wind Erosion From Disturbed Areas

Reclamation of reclaimed surface shall begin within one growing season.

Access Road

The paved mine access road is approximately 13,300 feet long. The road shall be maintained by Spring Creek.

Overland Conveyor System

The conveyor shall be covered. The drop distance shall be minimized at the one transfer point in the system. Baghouses shall be used at the in-pit truck dump/crusher and the transfer point.

Coal Quality Analytical Laboratory

The emissions from the Coal Quality Analytical Laboratory shall be controlled by a baghouse. Approximately 80 tons of coal per year will be crushed and analyzed at the laboratory.

Lump and Stoker Production

The lump operation, located at the truck dump, has a reject conveyor, which places the incorrectly sized product back in the truck dump. This operation processes, over a three-year average, approximately 13,800 tons per year, with a 60% reject tonnage. The remaining 40% is transported via trucks to the predefined customer. Emissions from the reject product shall be controlled by the truck dump suppression system.

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source

Test Protocol and Procedures Manual (ARM 17.8.106).

2. The Department may require further testing (ARM 17.8.105).

C. Recordkeeping Requirements

1. Spring Creek shall supply the Department with annual production information for all emission points, as required by the Department, in the annual emission inventory request. The request will include, but is not limited to, all sources identified in the most recent emission inventory report and sources identified in Section I.A of the permit analysis. This information submitted shall include the amount of coal produced (ARM 17.8.749).

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. Spring Creek shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include a change of control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emissions unit. The notice must be submitted to the Department in writing 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Spring Creek as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
4. Spring Creek shall document, by month, coal production levels. By the 25th day of each month, Spring Creek shall total the coal production levels during the previous 12 months to verify compliance with the limitation in Section II.A.1. A written report of the compliance verification shall be submitted annually to the Department along with the annual emission inventory (ARM 17.8.749).

Section III: General Conditions

- A. Inspection – Spring Creek shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Spring Creek fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Spring Creek of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*

(ARM 17.8.756).

- D. Enforcement – Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Spring Creek may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Attachment 1

AMBIENT AIR MONITORING PLAN SPRING CREEK COAL COMPANY Permit #1120-07

1. This ambient air monitoring plan is required by air quality Permit #1120-07 which applies to the Spring Creek Coal Company (Spring Creek) mining operation north of Decker. This monitoring plan may be modified by the Department of Environmental Quality (Department). All requirements of this plan are considered conditions of the permit.
2. Spring Creek shall operate and maintain three air monitoring sites in the vicinity of the mine and facilities. The exact locations of the monitoring sites are provided in the table below and have been approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and Parts 53 and 58 of the Code of Federal Regulations (CFR), or any other requirements specified by the Department.
3. Spring Creek shall continue air monitoring for at least two years following issuance of Permit #1120-06. The air monitoring data will be reviewed by the Department and the Department will determine if continued monitoring or additional monitoring is warranted. The Department may require continued air monitoring to track long-term impacts of emissions from the facility or require additional ambient air monitoring or analyses if any changes take place in regard to quality and/or quantity of emissions or the area of impact from the emissions.
4. Spring Creek shall monitor the following parameters at the sites and frequencies described below:

AIRS # AND SITE NAME	UTM COORDINATES	PARAMETER	FREQUENCY
30-003-0018 North of Office, #1	Zone 13	PM ₁₀ ¹	Every Sixth Day
	N4997500	PM ₁₀ Collocated ²	Every Sixth Day
	E 352400	Wind Speed and Direction, Sigma Theta, Temperature	Continuous
30-003-0019 SW of Office, #2	Zone 13 N 4995600 E 350500	PM ₁₀	Every Sixth Day
30-003-0026 WNW of Office, #4	Zone 13 N 4999562 E 348937	PM ₁₀	Every Sixth Day
¹ PM ₁₀ = particulate matter less than 10 microns. The requirement for a collocated PM ₁₀ sampler may be waived if the monitor operator operates a collocated PM ₁₀ sampler at another site.			

Trace metal analyses of sample filters will not be required at this time; however, the Department may require these analyses in the future.

5. Data recovery for all parameters shall be at least 80 percent computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met.
6. Any ambient air monitoring changes proposed by Spring Creek must be approved in writing by the Department.
7. Spring Creek shall utilize air monitoring and quality assurance procedures which are equal to or exceed the requirements described in the Montana Quality Assurance Manual, including revisions; the EPA Quality Assurance Manual, including revisions; 40 CFR; Parts 53 and 58 CFR; and any other requirements specified by the Department.
8. Spring Creek shall submit quarterly data reports within 45 days after the end of the calendar quarter and an annual data report within 90 days after the end of the calendar year. The annual report may be substituted for the fourth quarterly report if all information in 9 and 10 below is included in the report.
9. The quarterly report shall consist of a narrative data summary and a data submittal of all data points in AIRS format. This data may be submitted on 3½" diskettes or on AIRS data entry forms. The narrative data summary shall include:
 - a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations in relation to the mine and facilities and the general area;
 - b. A hard copy of the individual data points;
 - c. The quarterly and monthly means for PM₁₀ and wind speed;
 - d. The first and second highest 24-hour concentrations for PM₁₀;
 - e. The quarterly and monthly wind roses;
 - f. A summary of the data collection efficiency;
 - g. A summary of the reasons for missing data;
 - h. A precision and accuracy (audit) summary;
 - i. A summary of any ambient air standard exceedances; and
 - j. Calibration information.
10. The annual data report shall consist of a narrative data summary containing:
 - a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations in relation to the mine, the facilities, and the general area;
 - b. A pollution trend analysis;
 - c. The annual means for PM₁₀ and wind speed;
 - d. The first and second highest 24-hour concentrations for PM₁₀;

- e. The annual wind rose;
 - f. An annual summary of data collection efficiency;
 - g. An annual summary of precision and accuracy (audit) data;
 - h. An annual summary of any ambient standard exceedance; and
 - i. Recommendations for future monitoring.
11. The Department may audit, or may require Spring Creek to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the Department may recommend or require changes in the air monitoring network and associated activities in order to improve precision, accuracy, and data completeness.

Permit Analysis
Spring Creek Coal Company
Permit #1120-07

I. Introduction/Process Description

A. Permitted Facility

Spring Creek Coal Company (Spring Creek) operates a surface coal mine located about 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East, in Big Horn County, Montana.

The facility operates a centralized coal processing and handling system including a truck dump, crushing, conveying, storage barn, and two train load-outs. An in-pit truck dump and crusher and an overland conveyor system are operated, as well as the necessary auxiliary equipment, including dragline, trucks, shovels, scrapers, drills, dozers, etc., as applicable.

B. Permit History

Permit #1120 was issued to Spring Creek on May 11, 1979, for the operation of a coal processing and handling facility.

Permit #1120-01 was issued March 15, 1993, for the construction and use of an in-pit truck dump and crusher and an overland conveyor system. **Permit #1120-01** replaced Permit #1120-00.

On December 9, 1994, Permit #1120-02 was issued increasing the allowable coal production rate from 7 million to 15 million tons per year.

The permitted area changed from 4,793 to about 4,482 acres. The coal seam being mined was the Anderson Dietz Seam. Overburden removal continued to be done by dragline, with truck/shovel assist. The mine used standard mining and reclamation techniques and equipment. The facility's area included a truck dump, crushers, conveyors, storage barn, and rail load-out. Some coal was directly hauled to the facility's area. Coal from pit #1 was hauled to an in-pit crusher and then carried by an overland conveyor to the facilities area. **Permit #1120-02** replaced Permit #1120-01.

Spring Creek was issued Permit #1120-03 on May 18, 1995, to correct language in the permit relative to the truck dump and to include a baghouse on the coal quality analytical laboratory. **Permit #1120-03** replaced Permit #1120-02.

On March 22, 1998, Permit #1120-04 was issued to Spring Creek to change the ambient monitoring plan in Attachment 1 from requiring monitoring every third day to requiring monitoring every sixth day. The modification also corrected the volume processed by the laboratory from 11 tons per year to 80 tons per year, and identified the lump and stoker production as permitted equipment. The lump and stoker production increased PM₁₀ emissions by 1.38 tons per year. Also, the rule references used by the Department of Environmental Quality (Department) in the permit were updated. **Permit #1120-04** replaced Permit #1120-03.

On September 14, 1999, Spring Creek requested an alteration to Permit #1120-04. Spring Creek proposed to install an Agglomeration Dust Suppression (ADS) system at four locations in the facility: the primary crusher, the conveyor #1 head pulley, the secondary crusher, and the rail loadout area. The ADS system replaced the existing dust control system, which included baghouses and surfactant and water application. Spring Creek proposed no changes in emissions as a result of the ADS system. A reduction in fugitive emissions was actually expected. The permit conditions were revised to reflect the changes in control equipment. **Permit #1120-05** replaced Permit #1120-04.

On December 31, 2001, the Department received a letter from Spring Creek requesting approval for the relocation of their upwind ambient air monitoring site. The request included a facility map identifying two potential new locations. The Department determined that either site location indicated on the facility map would be appropriate and approved the location transfer. Further, the Department indicated that Spring Creek must provide the Department with the actual site chosen for the new Hi-Vol site.

Subsequently, on May 2, 2002, the Department received a letter and site map indicating the actual site that was selected for the new Hi-Vol site. The actual site selected is identified in Attachment #1 to air quality Permit #1120-06. **Permit #1120-06** replaced Permit #1120-05.

C. Current Permit Action:

On July 6, 2005, the Department received a Montana Air Quality Permit (MAQP) Application from Kennecot Energy for a proposed coal production increase at Spring Creek. The application requested a modification to Permit #1120-06 to increase maximum annual coal production from 15 million tons per year (MMTPY) to 20 MMTPY and to include another rail load-out facility. On December 22, 2005, the Department received additional information and the MAQP Application was considered complete. **Permit #1120-07** replaces Permit #1120-06.

D. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the operation. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Sub-Chapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment, including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary, using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Montana Clean Air Act, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Spring Creek shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.
4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than four hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals, or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Sub-Chapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Spring Creek must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Sub-Chapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over six consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Spring Creek shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
 3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, suffer, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
 4. ARM 17.8.310 Particulate Matter, Industrial Processes. This rule requires that no person shall cause, allow, or permit to be discharged into the outdoor atmosphere particulate matter in excess of the amount set forth in this rule.
 5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
 6. ARM 17.8.340 Standard of Performance for New Stationary Sources. The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60. Based on the information submitted, Spring Creek shall comply with Subpart Y - Coal Preparation Plants. An opacity limitation of 20% is applicable on coal preparation, conveying, storage, and loading systems as described in Section II of the permit.
 7. ARM 17.8.341 Emissions Standards for Hazardous Air Pollutants. The owner or operator of any existing or new stationary source, as defined and applied in 40 CFR Part 61, shall comply with the standards and provisions of 40 CFR Part 61.
- D. ARM 17.8, Sub-Chapter 5, Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:
1. ARM 17.8.504 Air Quality Permit Application Fees. This section requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Spring Creek submitted the appropriate permit application fee for the current permit action.
 2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.
- An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation

fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Sub-Chapter 7, Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits – When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, alter, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. The Spring Creek facility has a PTE greater than 25 tons per year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits – General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit Program.
4. ARM 17.8.745 Montana Air Quality Permits – Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units – Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Spring Creek submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Spring Creek submitted an affidavit of publication of public notice for the July 6, 2005, issue of *The Sheridan Press*, a newspaper of general circulation in the city of Sheridan, Sheridan County, Wyoming, as proof of compliance with the public notice requirements.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be used. The BACT analysis is discussed in Section III of this Permit Analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving any permittee of the

responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications – Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's potential to emit is less than 250 tons per year of any pollutant (excluding

fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Permit #1120-07 for Spring Creek, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant (excluding fugitive emissions).
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to 40 CFR 60, Subpart Y.
 - e. This facility is not subject to any current NESHAP standards.
 - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Spring Creek is a minor source of emissions as defined under Title V. Therefore, Spring Creek is not required to obtain a Title V Operating Permit. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit in the future, Spring Creek will be required to obtain a Title V Operating Permit.

III. Best Available Control Technology Determination

A BACT determination is required for each new or altered source. Spring Creek shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action increases maximum annual coal production and also adds an additional emission source

(Rail Load-out #2) to the facility; therefore, a BACT analysis was required for the current permit action.

The Department determined that BACT for the increase in maximum annual coal production is the continuation of emission control techniques currently used at the mine. This includes chemical stabilization and watering on haul roads and good engineering practices such as minimizing fall distances on material handling operations as necessary to maintain compliance with the opacity and reasonable precautions limitations.

Spring Creek is proposing a new Rail Load-out facility (Rail Load-out #2). The existing Rail Load-out (Rail Load-out #1) dust control system includes:

- Agglomeration dust suppression systems (water fogging systems);
- Periodic manual wash down throughout all areas of the plant; and
- Enclosed load out areas and plant buildings.

The design for the Rail Load-out #2 includes telescoping chutes as part of the precision load-out process, so this option for dust control is considered inherent with the purchased load-out system. The design of the new load-out building includes metal siding to minimize fugitive dust emissions generated by wind exposure. These control measures will be implemented in addition to the controls used for the existing load-out. The controls that have been reviewed are listed below.

Option #1: Periodic manual wash down only

This option is to operate the proposed new rail load-out as designed and manual washing of the system would be utilized to meet Mine Safety and Health Administration (MSHA) requirements for dust accumulations.

Option #1 does not provide the level of effectiveness necessary to meet Kennecott Energy's safety, health, and environmental standards. Without continuous dust control, the system would not properly control dust on a continuous basis. The cost of periodic wash downs are as follows:

- Labor costs related to 4-hour wash downs seven times per week (labor cost at \$50/hour);
- Water consumption of approximately 76 gallons per minute;
- Annual expense of \$5,000 for water system maintenance and water pump electrical costs; and
- High electrical cost related to heating Rail Load-out #2, assumed to be \$10,000/year.

Option #2: Baghouse

Reduction of airborne dust in the Rail Load-out #2 is possible by installing a baghouse. The capital cost and installation costs of a baghouse would require an investment of approximately \$500,000 to \$1,000,000 based on a general estimate of baghouse costs for controlling the dust loading associated with a rail load-out facility. A baghouse would provide:

- Improved dust control; and
- Reduce labor costs related to 2-hour wash downs once per week (labor cost at \$50/hour).

Additional operating costs would consist of:

- Annual expense of \$15,000 for baghouse maintenance;
- High electrical cost related to running the baghouse, assumed to be \$20,000/year; and
- High electrical cost related to heating the Rail Load-out #2, assumed to be \$10,000/year.

Option #3: Passive Emission Control (PEC) System

This option is the installation of PEC system in the Rail Load-out #2 in areas where it can be installed. The PEC system is comprised of smooth transition chute work to prevent coal dusting. The only applicable location for a PEC in the Rail Load-out #2 system is at the tail pulley where coal would be transferred into the Rail Load-out #2 system. The approximate capital and installation costs for a PEC system are \$50,000 to \$60,000 to control emissions from the existing 200-ton bin to the new Conveyor #5.

This option would provide:

- Improved dust control;
- Reduced labor costs related to wash downs once per week (labor cost at \$50/hour);
- Labor costs related to 2-hour wash downs once per week (labor cost at \$50/hour);
- Decreased flexibility on maintenance timing; and
- No need for additional heating of Rail Load-out #2.

Option #4: Agglomeration Dust Suppression (ADS) System

This option is the installation of atomizing water sprays and baffles in the Rail Load-out #2. The wet spray system is not being considered in the loading chutes directly but is being considered in the conveyor and transfer systems up to where the coal loads into the precision load-out bins. Capital expense is \$40,000.

This option would provide:

- Improved dust control;
- Reduced labor costs related to wash downs once per week (labor cost at \$50/hour);
- Water consumption of approximately 3 gallons per minute;
- Reduced annual expense for maintenance; and
- Reduced electrical cost related to heating the facility.

Comparison of Options

While options #2 and #3 will reduce the amount of actual PM₁₀ emissions to the atmosphere, the reductions are difficult or impossible to quantify. Therefore, a cost effectiveness estimate for each option and possible combinations thereof cannot be determined. Cost estimates of each option are presented below to show the comparative expense of purchasing, installing, and maintaining each one. The cumulative costs of implementing a combination of these options would reflect an economy of scale associated with installing them at the same time.

Economic Analysis

Option	#1 Periodic Manual Washdown	#2 Baghouse	#3 Passive Emission Control	#4 Agglomeration Dust Suppression
Capital expense	\$0	\$750,000	\$60,000	\$198,000
Annual	\$15,000	\$45,000	Low	\$2,000
Capital Recovery Factor (7 years at 10%)	\$0	\$154,050	\$12,350	\$40,700
Other Considerations				
Heating	\$10,000	\$10,000	\$0	\$10,000
Wash down labor	\$70,000	\$35,000	\$17,500	Reduced
Water	76 gallon/minute	76 gallon/minute	76 gallon/minute	3 gallon/minute

BACT Conclusions

The preferred alternative based on an economic analysis that includes capital and operating expenses is Option #1. However, to achieve emission controls, a combination of baghouse, periodic wash down, and the PEC will afford this control. The addition of the ADS system would further reduce controlled PM emissions, but its incremental cost effectiveness would be extremely high. If all controls are implemented, the baghouse for dust would control dust from the load-out bins; approximately 24 fogging nozzles would be installed on the conveyor system; one PEC system would be installed over the conveyor loading system point. These controls would supplement the emission reductions achieved by the periodic manual wash down.

The periodic manual wash down, baghouse, PEC, and ADS system will constitute BACT for the current permitting action.

IV. Emission Inventory and Control Technology Review

The following tables list the estimated PM₁₀, particulate matter, and gaseous emissions as shown in the application. The emissions are based on the maximum production rate of the equipment. The emission control measures listed as conditions of the permit have been deemed to represent BACT for this project and are consistent with similar mining operations.

Topsoil Rmvd (BCY)	OB Holes Drilled	OB Blasts	OB Rmvd Truck/Shovel (BCY)	OB Haul Truck VMT	OB Rmvd Dragline (BCY)	Coal Holes Drilled	Coal Blasts	Coal Rmvd (Tons)	Coal Haul Truck VMT
750,000	10,571	239	25,318,561	659,074	25,486,979	4,429	126	20,000,000	272,474
Coal Dumping at Truck Dump (Tons)	Coal Dumping at Conveyor (Tons)	Water Truck VMT	Open Acres	Storage Pile Acres at Conveyor	Storage Pile Acres at Truck Dump	Access Road VMT	Stoker Loadout (Tons)	Diesel Fuel Used (Gallons)	Gasoline Used (Gallons)
20,000,000	8,304,032	93,620	1,250	1	4	182,500	13,800	2,727,872	50,000

Mining Operation	PM ₁₀ Emission Factor Equation	Uncontrolled TSP Emission Factor	Percent Control	PM ₁₀ /TSP Ratio	PM ₁₀ Emission Rate (ton/year)
Topsoil removal	750,000 yd ³ * 0.38 lb/yd ³ * 0.0005 lb/ton * 0.5	0.38 lb/yd ³	0	0.50	71.25
OB drilling	10,571 holes drilled * 1.5 lb/hole * 0.0005 lb/ton * 0.5	1.5 lb/hole	0	0.50	3.96
OB blasting	239 blasts * 37.5 lb/blast * 0.0005 lb/ton * 0.50	37.5 lb/blast	0	0.50	2.24
OB removal (truck/shovel)	0.015 lb/yd ³ * 25,318,561 yd ³ * 0.0005 lb/ton * 0.50	0.015 lb/yd ³	0	0.50	94.94
OB truck travel	659,074 VMT * 6 lb/VMT * 0.0005 lb/ton * (1-0.85) * 0.36	6 lb/VMT	85	0.36	106.77
OB removal (dragline)	25,486,979 yd ³ * 0.03 lb/yd ³ * 0.0005 lb/ton * 0.5	0.03 lb/yd ³	0	0.50	191.15
Coal drilling	4,429 holes drilled * 0.22 lb/hole * 0.0005 lb/ton * 0.50	0.22 lb/hole	0	0.50	0.24
Coal blasting	126 blasts * 26.25 lb/blast * 0.0005 lb/ton * 0.50	26.25 lb/blast	0	0.50	0.83
Coal removal	20,000,000 tons * 0.0021 lb/ton * 0.0005 lb/ton * 0.5	0.0021 lb/ton	0	0.50	10.50
Coal truck travel	272,474 VMT * 6 lb/VMT * 0.0005 lb/ton * (1-0.85) * 0.36	6 lb/VMT	85	0.36	44.14
Coal dumping at conveyor	8,304,032 tons * 0.01275 lb/ton * 0.0005 lb/ton * 0.5	0.01275 lb/ton	0	0.50	26.47
Coal dumping at truck dump	20,000,000 tons * 0.01275 lb/ton * 0.0005 lb/ton * (1-0.90) * 0.5	0.01275 lb/ton	90	0.50	6.38
Water truck travel	93,620 VMT * 6 lb/VMT * 0.0005 lb/ton * (1-0.85) * 0.36	6 lb/VMT	85	0.36	15.17
Wind erosion of open acres	1,250 acres * 0.38 ton/acre-year * 0.50	0.38 ton/acre-year	0	0.50	237.50
Wind erosion of storage pile at conveyor	1 acre * 0.38 ton/acre-year * 0.50	0.38 ton/acre-year	0	0.50	0.19
Wind erosion of storage pile at truck dump	4 acres * 0.38 ton/acre-year * 0.50	0.38 ton/acre-year	0	0.50	0.76
Vehicle travel on paved access road	182,500 VMT * 3 lb/VMT * 0.0005 lb/ton * (1-0.85) * 0.5	3 lb/VMT	85	0.50	20.53
Stoker loadout	13,800 tons * 0.2 lb/ton * 0.0005 lb/ton * 0.5	0.2 lb/ton	0	1.00	1.38
Train loading at loadout #1	20,000,000 tons * 0.0059 lb/ton * 0.0005 lb/ton * (1-0.99)	0.0059 lb/ton	99	1.00	0.59
Train loading at loadout #2	20,000,000 tons * 0.0059 lb/ton * 0.0005 lb/ton * (1-0.99)	0.0059 lb/ton	99	1.00	0.59
Diesel fuel usage	2,727,872 gallons * 0.0301 lb/gallon * 0.0005 lb/ton	0.0301 lb/gal	0	1.00	41.05
Gasoline usage	50,000 gallons * 0.00606 lb/gallon * 0.0005 lb/ton	0.00606 lb/gal	0	1.00	0.15

Primary crusher at truck dump	20,000,000 tons * 0.02 lb/ton * 0.0005 lb/ton * (1-0.99) * 0.5	0.02 lb/ton	99	0.50	1.00
Secondary crusher	20,000,000 tons * 0.06 lb/ton * 0.0005 lb/ton * (1-0.99) * 0.5	0.06 lb/ton	99	0.50	3.00
Primary crusher at conveyor	8,304,032 tons * 0.02 lb/ton * 0.0005 lb/ton * (1-0.99) * 0.5	0.02 lb/ton	99	0.50	0.42
Total					881.21

Note: Emission factors and PM₁₀/TSP ratios are from Permit #1120-06 and 2003 Emissions Inventory Summary.

Tons of explosives on coal	Tons of explosives on OB	Diesel fuel used (gallons)	Gasoline used (gallons)
3,498	20,987	2,727,872	50,000

Mining Operation	NOx Emission Factor Equation	NOx Emission Factor	NOx Emission Rate (ton/year)
Explosives on coal	3,498 tons explosives * 17 lb/ton * 0.0005 lb/ton	17 lb/ton	29.73
Explosives on OB	20,987 tons explosives * 17 lb/ton * 0.0005 lb/ton	17 lb/ton	178.39
Vehicle exhaust (diesel)	2,727,872 gallons * 0.286 lb/gallon * 0.0005 lb/ton	0.286 lb/gal	390.09
Vehicle exhaust (gasoline)	50,000 gallons * 0.205 lb/gallon * 0.0005 lb/ton	0.205 lb/gal	5.13
Total			603.33

Note: The values shown are estimated total emissions from vehicle exhaust (diesel and gasoline) and explosives detonations.

V. Existing Air Quality

Spring Creek has monitored particulate levels around the mine through the life of the operation. This data is on file with the Department. Attachment 1 describes the current air monitoring plan. Current particulate levels are below state and federal standards. The current permit action increases maximum annual coal production at the facility and included another rail load-out facility. The new Hi-Vol Site #4 location is identified in Attachment 1 to air quality Permit #1120-07.

VI. Ambient Air Quality Impact Analysis

The current permitting action proposed changes in emissions; therefore, air dispersion modeling was required. The modeling analysis for Spring Creek's proposed production rate has demonstrated compliance with the applicable National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality Standards (MAAQS). Modeled impacts from NO_x sources are well below the NO_x standards. The modeling results show that the peak modeled PM₁₀ impact is very near the 24-hour PM₁₀ standard; however, EPA's models and modeling protocol are designed to provide conservative results. Ongoing PM₁₀ monitoring at Spring Creek will provide verification that the ambient PM₁₀ impacts do not exceed the NAAQS and MAAQS.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: Spring Creek Coal Company
P.O. Box 67
Decker, MT 59025

Air Quality Permit Number: 1120-07

Preliminary Determination Issued: 01/03/06

Department Decision Issued: 01/23/06

Permit Final: 02/08/06

1. *Legal Description of Site:* Spring Creek operates a surface coal mine located approximately 11 miles north of Decker, Montana. The mine covers portions of Sections 13, 14, 21, 23, 24, 25, 26, and 27 in Township 8 South, Range 39 East, and Sections 3, 10, 11, 15, 18, 19, 20, 27, 28, 29, 30, 31, 32, and 34 in Township 9 South, Range 40 East in Big Horn County, Montana.
2. *Description of Project:* Spring Creek submitted a permit application to modify Permit #1120-06 to increase maximum annual coal production from 15 MMTPY to 20 MMTPY. The application also requested to include Rail Load-out #2.
3. *Objectives of the Project:* The issuance of Permit #1120-07 would allow Spring Creek to implement the above mentioned increase in annual coal production and addition of a rail load-out facility. The company's objective is to provide business and revenue for the company. Spring Creek would continue to operate as a surface coal mine.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because Spring Creek demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in Permit #1120-07.
6. *Regulatory Effects on Private Property Rights:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would not unduly restrict private property rights.
7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Terrestrial and Aquatic Life and Habitats			X			yes
B.	Water Quality, Quantity, and Distribution			X			yes
C.	Geology and Soil Quality, Stability, and Moisture			X			yes
D.	Vegetation Cover, Quantity, and Quality			X			yes
E.	Aesthetics			X			yes
F.	Air Quality			X			yes
G.	Unique Endangered, Fragile, or Limited Environmental Resource			X			yes
H.	Demands on Environmental Resource of Water, Air, and Energy			X			yes
I.	Historical and Archaeological Sites			X			yes
J.	Cumulative and Secondary Impacts			X			yes

Summary of Comments on Potential Physical and Biological Effects:

The following comments have been prepared by the Department.

- A. Terrestrial and Aquatic Life and Habitats;**
- B. Water Quality, Quantity, and Distribution;**
- C. Geology and Soil Quality, Stability, and Moisture;**
- D. Vegetation Cover, Quantity, and Quality; and**
- E. Aesthetics**

Overall impacts to the physical and biological environmental parameters noted above would be minor because the activities would occur within the current mining area with little or no additional surface disturbance. Furthermore, the current permit action would allow for an increase in the mining rate within the currently approved mine plan area. This would result in a relatively small increase in air pollutant emissions above those associated with the current mining rate. In the maximum emission scenario, there would be a particulate emission increase of approximately 27 percent above the current permitted level. All of the increase would be fugitive emissions. There would be a small increase in air pollutant deposition in the area and in the use of water for dust suppression.

F. Air Quality

The air quality impacts from the increased activities would be minor because Permit #1120-07 would include conditions limiting the visible emissions (opacity) from the plant operations, and would require water spray bars and other means to control air pollution. The plant operations would continue to be limited by Permit #1120-07 to total emissions of 250 tons per year or less from non-fugitive sources, including any additional equipment used at the site. This facility would continue to be considered a minor source of air pollution for the Title V program, because the facility's potential emissions would be below 100 tons per year. Overall, air emissions from the increased activities would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small amount of additional pollutants generated. Air pollution controls currently used at the facility, such as fabric filtration, chemical stabilization, and water sprays, would reduce air emissions from equipment operations, storage piles, and haul roads.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The increased activities would occur within the previously disturbed industrial site at the mine. As part of the MEPA analysis on initial mine development, assessments of potential impacts to unique endangered, fragile, or limited environmental resources were done by the Department, including contact with the Montana Natural Heritage Program – Natural Resource Information System (NRIS) to identify species of special concern at the mine site. The likelihood that the increased mining rate would impact unique endangered, fragile, or limited environmental resources would be minor because of the relatively small increase in emissions, the lack of change to the mine plan area, and the conditions placed in Permit #1120-07.

H. Demands on Environmental Resources of Water, Air, and Energy

The increased activities would require minimal additional amounts of water, air, and energy. Limited amounts of water would be required to be used for dust control for the equipment, product stockpiles, and surrounding haul roads. Further, as described in Section 7.F. of this EA, pollutant emissions generated from the operation would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small increase in emissions, the lack of change to the mine plan area, and the conditions placed in Permit #1120-07. Overall, the demands and impacts to the environmental resource of water, air, and energy related to the increased activities would be minor.

I. Historical and Archaeological Sites

The increased activities would occur within the previously disturbed industrial site at the mine. According to past correspondence from the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site because of previous industrial disturbance within the area. Therefore, the likelihood that the increased activities would have an impact on historical or archaeological sites would be minor.

J. Cumulative and Secondary Impacts

The increased activities from the project would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment. There would be a relatively small increase in air emissions of particulate matter and PM₁₀ and no increase in the mine plan area.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Social Structures and Mores				X		yes
B.	Cultural Uniqueness and Diversity				X		yes
C.	Local and State Tax Base and Tax Revenue			X			yes
D.	Agricultural or Industrial Production			X			yes
E.	Human Health			X			yes
F.	Access to and Quality of Recreational and Wilderness Activities			X			yes
G.	Quantity and Distribution of Employment				X		yes
H.	Distribution of Population				X		yes
I.	Demands for Government Services			X			yes
J.	Industrial and Commercial Activity			X			yes
K.	Locally Adopted Environmental Plans and Goals				X		yes
L.	Cumulative and Secondary Impacts			X			yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS:

The following comments have been prepared by the Department.

- A. Social Structures and Mores**
B. Cultural Uniqueness and Diversity

The Department determined that the increased activities would not have an impact on the social structures and mores or the cultural uniqueness and diversity of this area of operation because the increase in the mining rate is relatively minor and the activities would occur within the previously disturbed industrial area. The surrounding area would remain unchanged as a result of the increased activities.

- C. Local and State Tax Base and Tax Revenue**

The increased activities would have little or no impact on the local and state tax base and tax revenue. No full time, permanent employees would be added as a result of issuing Permit #1120-07. The increase in the amount of equipment at the site would be minimal.

- D. Agricultural or Industrial Production**

The increased activities would occur within the previously disturbed industrial area; therefore, the Department would not expect an impact to or displacement of agricultural production. The increased activities would be relatively small compared to the existing mining operation and would have only a minor impact on local industrial production. In addition, the facility would operate

within the permitted mining area, which upon completion of mining operations, would be reclaimed, as specified, by the Environmental Management Bureau (EMB) of the Department. Minor and temporary effects may occur to agricultural land, and the EMB would be responsible for oversight of any reclamation activities.

E. Human Health

Permit #1120-07 would incorporate conditions to ensure that the increased activities would be accomplished in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As noted in Section 7.F. of this EA, the air emissions from this facility would be minimized by fabric filtration, water spray, chemical stabilization, and opacity limitations. Furthermore, the increased activities and resulting air emissions would be relatively small. Therefore, any associated impacts to human health would be minor based as a result of compliance with the applicable standards and operational conditions and limitations incorporated within the permit.

F. Access to and Quality of Recreational and Wilderness Activities

The increased activities would occur within the previously disturbed industrial property and would not impact access to recreational and wilderness activities. Minor impacts on the quality of recreational activities could be created from the noise from the increased activities; however, these would be small in comparison to existing activities. Emissions from the operation would be minimized as a result of the conditions that would be placed in Permit #1120-07. Therefore, the associated impacts on the access to and quality of recreational and wilderness activities would be minor.

**G. Quantity and Distribution of Employment; and
H. Distribution of Population**

As a result of the relatively small size of the operations associated with the increased activities, the quantity and distribution of employment and the distribution of population in the area would not be impacted. No full time, permanent employees would be added as a result of issuing Permit #1120-07 and no related secondary employment would be expected.

I. Demands of Government Services

Minor increases may be observed in the local traffic on existing roads in the area. Very limited additional government services would be required relative to these operations. Overall, demands for government services would be minor.

J. Industrial and Commercial Activity

The increased activities would represent only a minor increase in the industrial activity in the area because of the small production increase in comparison to the existing operation. No additional commercial activity would result because no secondary activities are expected to move to the area as a result of the increased activities.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The increased activities would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because of the small increase in potential air emissions. Increases in traffic would have minor impacts on the local traffic in the immediate area. Because the project would be a relatively small increase of particulate emissions compared to the current operation, only minor economic impacts to the local economy would be expected. New businesses would not be drawn to any areas and permanent jobs would not be created or lost as a result of the proposed project.

Recommendation: An EIS is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from the proposed increase in activities are minor; therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Department of Environmental Quality - Permitting and Compliance Division; Montana Natural Heritage Program; and State Historic Preservation Office.

Individuals or groups contributing to this EA: Montana Department of Environmental Quality (Air Resources Management Bureau), Montana Natural Heritage Program, and State Historic Preservation Office (Montana Historical Society).

EA prepared by: Eric Thunstrom
Date: October 18, 2005